

AMENDMENTS TO THE CLAIMS:

1-3. (Canceled).

4. (Currently Amended) A method of monitoring an operation of a thermal device, comprising:

detecting data on operating states of said thermal device;

storing said detected data at specified time intervals along with time of detection as first operating state data, wherein a first number of operating state data are stored in sequence so that when a new operating state data is added, an oldest operating state data is dropped;

storing detected data as failure data when a failure occurs in said thermal device along with the time of failure;

storing said detected data as second operating state data for a second number of time intervals less than said first number of time intervals after the failure;

storing said detected data as third operating state data at a starting point at each control ~~step~~stage; and

outputting said stored first, second and third operating state data and failure data.

5. (Canceled).

6. (Currently Amended) An apparatus for monitoring an operation of a thermal device, comprising:

detectors for detecting operating states of said thermal device;

a processor for receiving outputs from said detectors;

a storage device connected to said processor for receiving data based on said outputs from said detectors along with a time of detecting as operating state data at specified time intervals, a first number of time intervals being stored so that when a new operating state data is added, an oldest operating state data is dropped;

said storage device also storing data when a failure occurs along with the time of failure, wherein said operating state data continues to be stored for a second number of time intervals smaller than said first number of time intervals after the failure;

wherein said storage device also stores said operating state data at a starting point of each control ~~step~~stage; and

an output device used for outputting data from said storage device.

7. (Previously Presented) The apparatus according to claim 6, further comprising a monitoring device for receiving data from said output device.

8. (Canceled).